



# CONDUCT OF OPERATIONS COURSE

**Title:** Case Study 1: Midnight Shift Surveillance

**Reference:**

- (a) DOE 5480.19, Conduct of Operations Requirements for DOE Nuclear Facilities
- (b) DOE-EM-STD-5505-96, Operations Assessments

**Activities:** Using the case study materials, the student will:

- 1. Identify the deviations from expectations.
- 2. Identify the DOE 5480.19 requirements which are not being met.

**Objectives:** The above activities support student performance of the following:

- 1. Refer to a copy of DOE 5480.19 and locate applicable guidelines and requirements for specific activities. (1.a)
- 2. For each of the eighteen chapters in Attachment I to the Order, explain how each chapter contributes to an effective and safe operational environment. (1.b)

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## MIDNIGHT SHIFT SURVEILLANCE

When observing shift routines at a DOE facility you follow a surveillance operator during an entire shift. At shift turnover, the off-going operator states that "all is normal." During the shift, you accompany the operator on tours throughout the facility. While in the radiological controlled area at tank farm number two, you notice a pair of gloves, two sample bottles, and a half full pail of liquid unattended on the ground. Upon exiting the area, the count rate meter alarms intermittently. The operator informs you that the back plate of the probe is loose and therefore the probe should be held sideways to prevent the meter from alarming. The surveillance operator reports the malfunctioning probe to the Safety Department. The surveillance operator also takes this opportunity to demonstrate that the portable radio used while on tours causes fluctuations in a nearby tank level indicator. Later, while touring the pump station, you notice a sign that reads "IF MANUALLY OPERATED, DO NOT OVER TORQUE THIS VALVE." When questioned, the surveillance operator states that she does not understand the meaning of this sign.

**Two days later.....** You observe another surveillance operator during an entire shift. During shift turnover, the off-going operator states that the count rate meter in use at the control point to tank farm number two is alarming intermittently. Furthermore, he states that "the Safety Department has been informed." During the shift, you accompany the operator on tours throughout the facility. While in the radiological controlled area at tank farm number two, you notice that the pail of liquid observed earlier in the week is now full. Additionally, you observe a wrench and two foot piece of pipe on the floor next to a capped pipe fitting. Upon exiting the area, you find that the count rate meter operates normally. The operator acts surprised when the count rate meter does not alarm and tells you that he had reported the defective meter to the Safety Department three times this week. While touring the pump station, you ask this operator if he can explain the meaning of the sign that reads "IF MANUALLY OPERATED, DO NOT OVER TORQUE THIS VALVE." The operator states that this valve is always operated from the control room, and if directed to operate it manually, he will ask the control area operator for guidance.

1. Identify any deviations from expectations and state the DOE 5480.19 requirements which are not being met.

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**NOTES**